

12062/B

F XIV. 2

19

OBSERVATIONS,

WITH

CASES

ILLUSTRATIVE OF

A NEW, SIMPLE, AND EXPEDITIOUS MODE, OF

CURING

GOUT.

By WILLIAM BALFOUR, M. D.

EDINBURGH:

Printed by J. & C. Muirhead.

1816.

THE following Observations and Cases were published in the EDINBURGH MEDICAL and SURGICAL JOURNAL, 1st October 1816. But I have thought proper to reprint them, as an appropriate and interesting Appendix to my Work on RHEUMATISM and SPRAINS—the mode of cure, in all three diseases, being the same.

OBSERVATIONS

ON

G O U T.

IN my Observations, with cases illustrative of a new, simple, and expeditious mode of curing Rheumatism and Sprains, there is the following:

“ Note VIII.—Whether there was a mixture of Gout in this gentleman’s case, or not, it is impossible with absolute certainty to ascertain. He denied that ever any thing of the kind was known in his family; and yet the painful swelling of the joints of some of the toes, strongly indicated something of this nature. I certainly gave it as my decided opinion, that there was no Gout present. But whether right or wrong in so doing—one thing is certain, that the pain and swell-

ing of the joints of the toes yielded as readily to Percussion and Compression, as did the pain and swelling of those parts which were, without doubt, affected with Rheumatism. If, therefore, there was any mixture of Gout in Sir T——s's case, then Percussion and Compression are a remedy for Gout equally as for Rheumatism. I see nothing, indeed, in the nature of things, why they should not be as beneficial in the one disease as in the other. In Madame Rey's case, I applied Percussion and Compression indiscriminately, to parts affected with Rheumatism, and to parts which were suffering from Gout; and with immediate and great advantage to both. It is my intention to prosecute this subject farther."

Soon after the above work was published, which was in the middle of February last, Madame Rey was attacked, early one morning, with a most violent paroxysm of Gout, in one of her great toes. She called her servant, and ordered her to compress and beat the part. This was done with moderate force, which excited the pain to a most torturous pitch. In a fit of despair, Madame Rey commanded the girl to use all her force, which was attended with immediate and complete relief from pain. No derangement of the system, or of any internal organ, followed; nor has she had (22d August) any return of the complaint in her extremities.

To these facts, which, as they did not come under my personal observation, but which are not the less true, I have not given in the form of a case, I have great pleasure in adding the following, as quite decisive of the justness of the opinion expressed in the preceding Note, with regard to the probability of Compression

and Percussion being applicable, with the best effects, in Gout.

CASE I.

ON the 2d of July I was requested to visit Mr. N. M. aged forty, and of a full habit of body, whom I found labouring under a severe fit of Gout. About ten or twelve days before I saw him, he had taken a very quick ride of about ten miles, by which he was greatly overheated, and took not the least care of himself afterwards. About two o'clock next morning, he awoke with violent pain in the balls of both great toes, reaching upwards along the upper part of the foot to the ankles; and, in the back part of the leg, to where the gastrocnemius muscle terminates in its tendon.

When I first saw him, the balls of the toes were still much swelled, pained, red, tense, and shining; and motion of the joints impracticable. The whole upper part of the foot, particularly about the roots of the toes and outer ankles, was œdematous. The legs were generally swelled as high as the calf; and along the Tendo Achillis, especially at its commencement, very painful. The patient was very lame. He described himself as having had a paroxysm every night, from the commencement of the complaint,—as the pain and heat were, in the night time, intolerable. Had taken no medicine; pulse 80; no appetite.

I applied Compression to the balls of the toes; Friction to the œdematous parts; Percussion to the ankles; and Friction and Percussion to the legs,—surrounding all the parts, afterwards, with a roller. The patient walked better immediately. Ordered a brisk purgative of decoction of senna and Epsom salts.

3d.—Medicine operated smartly. Underwent the same treatment this morning as yesterday, with increased advantage.

4th.—All the symptoms declining; and walking greatly improved.

5th.—Put on his usual shoe on one foot, this morning, after the operation, without being pained.—Is altogether so much better as not to need my attendance any longer.—I notwithstanding made two or three more calls, to ascertain the permanency of the cure.

This is the first case of pure regular Gout in which I applied Compression and Percussion; and it is the first instance, so far as I know, of any attempt to alleviate, or to cure Gout by mechanical means. My almost instantaneous, and complete, and permanent success, surprised me; but it surprised my patient more. He had suffered so long before I was called, from a conviction that no earthly power could be of any avail in Gout; and it was in compliance only with the solicitations and entreaties of his friends, that he submitted to call medical aid at all. By the time, however, that I had made him the third visit, he was of quite a different mind.

CASE II.

MR. J. O——, Solicitor, aged forty-seven, of a choleric-sanguine temperament, and full habit of body, called at my house on the 10th of June, very lame of both feet, occasioned by pain in the soles and ankles. Pain had been increasing for some days, and had now reached a height that threatened to incapacitate the patient from walking altogether. I applied Percussion to the parts affected for a few minutes, and then a thin flannel bandage. He immediately walked much better.

As this gentleman was not in the habit of carrying a stick, but had one on this occasion, from dire necessity, and on which he leaned much when he came in, I had the curiosity to look after him when he went away, to observe how he managed. He walked a few yards at first with much the same caution as when he came in, and then took his stick by the middle, and carried it horizontally. This single circumstance, had I had no assurances from the patient's own mouth, would have satisfied me as to the change produced by the operation. I visited him three or four times only, when he walked as well as ever he did in his life. There was no medicine exhibited on this occasion.

On the 22d July, this gentleman awoke in the morning with violent pain in the balls of the great toes, particularly at the flexures of the joints. Could not ascribe it to any cause, except that he had taken a walk the preceding evening rather longer than usual, but from which he experienced no fatigue or inconvenience at the time, and he went to bed, as usual, in perfect good health.

When I visited him at eleven o'clock forenoon, the parts were swelled, red, tense, and shining. The inflammation and pain were confined almost exclusively to the balls of the great toes, except that in the left, which was by much the worse, the pain reached upwards about half way along the metatarsal bone. The patient experienced continual excruciating pain, even when at perfect rest; his countenance indicated considerable distress, and he complained of sickness, general uneasiness, and oppression; pulse 82.

When I entered my patient's room, he told me, that, if I intended to apply Friction to the parts affected, he was afraid he could not suffer it; for he had attempted

that himself, but might as well have applied "living fire." I told him I knew Friction was quite inapplicable to his case as it then stood, but that I would, notwithstanding, employ mechanical means for moderating the paroxysm; and I hoped with complete success. I therefore grasped the ball of the toe in my hand, applying pressure gradually, to a very considerable degree. Slight pressure gave pain; heavy pressure none. In this manner I compressed the parts, sometimes with one hand, at other times betwixt both hands, for about ten minutes,—now and then interposing gentle Percussion; and then applied a thin flannel Bandage. Ordered a brisk purgative of senna and sulphate of magnesia.

I visited my patient again, about eight in the evening, when he informed me he had had considerably less pain, or rather none at all, from the moment I left him; but a good deal of cold shivering through the day; pulse 100; medicine operated well; swelling and redness of the parts considerably abated, and motion of the affected joints practicable. Applied Compression and Percussion, which the patient bore much better than in the morning.

July 23.—Slept the whole night without interruption; pulse 80; pain, swelling, and redness of the parts almost entirely gone; can suffer them to be handled with the utmost freedom, and walks very well. Applied Compression and Percussion this morning, in the evening, and again next morning, when my patient went abroad *in the prosecution of his business*.

That this affection was as well marked a paroxysm of Gout as can well be imagined, will, I believe, be denied by none. And, I may venture to assert, that the *eau medicinale* itself cannot boast of giving more

speedy and complete relief than did Percussion and Compression in the present instance.

To those who have implicitly adopted the pathology, that, in a certain plethoric and vigorous state of the system, and at a certain age, the extremities are liable to loss of tone;—that this atony is communicated, in some measure, to the whole system, but especially to the stomach;—that, to restore the tone of the parts, inflammation is excited in the extremities by the efforts of nature;—and that, by a certain degree and duration of this inflammatory affection, is the tone of the extremities and of the whole system restored;—to those, I say, who have regulated their practice entirely by this pathology, the mode of cure adopted in the preceding cases must appear dangerous and absurd.

In justification of the practice, however, it will to many be sufficient to say, that no such consequences followed the immediate check given to the inflammatory affection of the great toes, as is generally apprehended from any thing like repulsion of inflammation from the extremities, in Gout. So far was this from being the case, that the dyspeptic symptoms in the one, and the sickness and general oppression in the other case, were removed in proportion as the pain and swelling of the extremities gave way. It may be said, that this might be owing to the purgatives employed; and, I am very ready to allow them their proper share in the cures under consideration. I am even ready to admit, that purgatives are necessary or useful in every case of Gout; but this, on principles very different from what are maintained by some pathologists of the present day. I do not believe, that the good effects of purgatives and emetics in Rheumatism and Gout, are

to be attributed solely, or even chiefly, to their removing morbid secretions from the stomach and bowels; but to the excitation they occasion in the whole system, and particularly in the absorbents. Any person that has witnessed the effects of a drastic purgative in anasarca, will be at no loss to explain the *modus operandi* of such medicines, in any disease whose proximate cause is atony, either general or topical. Many of the more acrid cathartics are heating, and powerfully stimulant; and to its stimulant powers alone, I am convinced, does the *eau medicinale* owe its success in the cure of Gout. Many are in the habit of taking this medicine in small quantity as a preventive, and with success, when apprehensive of a paroxysm. Now, in such cases its success cannot be attributed to its evacuant powers; for it is not taken in quantity sufficient to produce any sensible evacuation. It therefore follows, that it produces its beneficial effects by increasing the action of the whole system—thereby preventing the atony and consequent inflammation of any particular part.

Dr. Sydenham thinks, that in proportion as the inflammation and pain are violent, the paroxysms are shorter, and the interval betwixt them longer. Dr. Cullen also, though much inclined to attempt alleviation of symptoms when pain is pressingly acute, ultimately decides, “that the common practice of committing the person to patience and flannel alone, is established upon the best foundation.”

If, however, some of the leading circumstances connected with a regular paroxysm of Gout are duly considered; the danger of retrocession, from attempts to moderate or remove inflammation and pain from the extremities by topical applications, will not appear &

priori even to be so great as the two high authorities just quoted would have us to believe.

In Mr. O——'s case, then, it appears to me, that the inflammation and pain in the extremities were the cause, not the consequence of the disturbance in the system; for when I first saw him, which was within five hours after the sensible commencement of the paroxysm, the inflammation of the great toes was high, and the pain excruciating, whereas the pulse beat 82 only in a minute. There was, therefore, no proportion betwixt the cause and effect, on the supposition of the affection in the extremities being symptomatic only. Again, arterial action increased to a hundred strokes of the pulse in a minute during the day, notwithstanding the inflammation and pain in the toes were greatly moderated. Now, the affection of the joints ought to have kept pace with the increased arterial action, had this not been the consequence but the cause of that. Should it be asked why, if the derangement of the system was symptomatic, fever increased after inflammation and pain subsided? I answer, that as inflammation and pain in any part cannot excite sympathetic action in the system otherwise than gradually; so, when this sympathy is produced, it cannot subside immediately on the abstraction of the cause. The heart and arteries having, from sympathy, acquired a disposition to increased action, this disposition may and does continue its influence, after the original cause has ceased to operate. A stream continues to run, and the ocean to roll, long after the fountain is dried up, and the winds cease to blow.

As to the sickness and general oppression of which this patient complained, they were, without doubt, oc-

occasioned by the excessive pain in the extremities. This was proved by their going off in proportion as pain abated—a circumstance this, of no uncommon occurrence. Local pain occasions sickness, oppression, vomiting, fainting, fever; whether its accession is spontaneous, as in Whitloe; or occasioned by the infliction of wounds, as by accidents, and in operations.

From this view and enumeration of facts, it is, I think, rendered highly probable, if not demonstrated, that the whole of the constitutional symptoms in this case, had their origin in the affection of the extremities; and, therefore, that the removing inflammation and pain from the extremities, could produce no constitutional injury.

It is the general opinion, and it has been sanctioned by the first medical authorities, that duration of inflammation in the extremities for a considerable time, is equally conducive to the health of the body, and to the vigour of the mind. This conceit, for it deserves no better a name, tends more than all other considerations combined, to reconcile Gouty patients to protracted sufferings. But if confinement to a room for weeks and for months together, is more conducive to health than moderate exercise in the open air, then a sedentary life, indolence, and inaction, should never be enumerated among the sources of disease. The truth is, emancipation from pain becomes positive pleasure for a time; and a person just relieved from long confinement, must be more feelingly alive to every external impression, than if his liberty and health had suffered no interruption.

The *modus operandi* of Compression and Percussion in the cure of Gout, is doubtless the same as takes place

in the cure of Rheumatism; that is, they produce their beneficial effects in both diseases, by promoting circulation in the vessels of the affected parts. This is as obvious to the senses in Gout as in Rheumatism; for in both the preceding cases, the swelling and redness visibly decreased while the patients were in my hands. Hence it might be inferred, that both diseases acknowledge the same proximate cause; but I shall say nothing on this subject at present.

Of the topical application of cold in Gout, as recommended by Dr. Kinglake, I have no experience. This much only I would observe, that cold applied to the extremities, even when free from disease, has often powerful effects on some of the internal organs,—the bowels for instance. No objection of this kind can be had to Compression and Percussion; their operation is the most simple and harmless that can be conceived. The nerves, which are the medium of pleasure and of pain, may be so affected by temperature, as to excite morbid sympathy in distant parts; but this cannot happen from Compression and Percussion, if applied by a skilful hand. Their only effect is, to remove and to obviate congestion. Whenever the former is accomplished, pain ceases. Is it not, therefore, as plain as cause and effect, that congestion is the cause of the pain? Now, is it to be believed for a moment, that, in relieving the nerves in any part of the extremities, from pressure, we run the risk of exciting inflammation and pain in the stomach, or any internal organ?

We have an instance, most apposite to our present purpose, of the power of Compression in removing pain, and obviating inflammation, in Whitloe,—one of the most excruciating diseases to which the human frame

is liable. But whatever the peculiarity of the inflammation that takes place in this complaint may be, certain it is, that it may be prevented by Compression, timeously applied. I have done it in many instances,*—even when the finger was livid, from the veins being unable to return their blood. This practice I call new likewise, for I never met with it in any author; and I was led to it from observing the effects of Compression and Percussion in other topical inflammatory affections, as recorded in the work referred to in the beginning of this paper.

* It is my intention to give, on some future occasion, a few cases of Whitloe, cured by Compression.



NOTES.

NOTES.

NOTE I.

I have again and again put a stop, by the timeous application of Percussion, followed by Compression, to incipient inflammaton, &c. Page 85.

A most satisfactory instance of the power of Percussion, in contusions, occured to me in the month of August. (1815.) A lady upwards of sixty years of age, having stepped into her kitchen one morning, to give some orders, on turning round, struck something solid with one of her feet, which brought her to the ground with her whole weight. In falling, she received a violent contusion, from the corner of a chair, in her right side, about the middle of the tenth and eleventh ribs. I saw her in a very short time after the accident, and proposed to take a little blood from her arm, which she declined. After rubbing the part patiently with the palm of

my hand, I applied a broad Bandage to the trunk of the body, with a Compress under it, on the part affected. From these she seemed to derive some small comfort while in the erect, but could get little or no rest in the horizontal, posture. In this way she passed ten or twelve days, when she became so much worse, that she submitted to lose a little blood by the lancet. I advised leeches, at the same time, to the part affected, which was not complied with. For a short time, she thought herself somewhat relieved, but soon became as ill as ever. On the 28th of August, I was again sent for, for I had not seen her for some time; when I found her under great alarm, from increase of the pain and restlessness in the night time. Satisfied from the beginning, that the injury done, was to the containing parts only, of the trunk, and finding Compression either by Friction or Bandages, did not reach the part affected, I resolved to try what Percussion would do. This I applied for a considerable time, regulating the force employed, by the feelings of the patient. The consequence was, she slept the whole succeeding night without interruption, and arose next morning, not free from pain, but so much relieved, that I found her quite cheerful and happy. From this time she continued to improve daily, and in a short time the pain left her entirely.

A few days before the above accident occurred, a gentleman of this city applied to me for advice, for

an affection of his breast, of which he had complained for some days. The pain was confined to the left side of the chest, affecting the whole space occupied by the true ribs, and impeding respiration considerably. Notwithstanding the last mentioned symptom, and that the patient described the pain as deeply seated, I did not consider the lungs themselves to be affected. Instead therefore, of bleeding him copiously, as I saw he expected, I began the application of Percussion to the part affected. This surprised the patient greatly. And, although I explained the object I had in view to accomplish by this process, he was quite distrustful; barely suffering me to proceed, upon the strongest assurances being given that no harm would be done. That any positive advantage was to be obtained from such a mode of proceeding, he could not suffer himself to believe. I nevertheless continued my operation for a few minutes, and desired him to call again, next day. I neither saw nor heard any more of this gentleman, however, till about a fortnight after, when one of his acquaintances met me in the street, and congratulated me on performing an instantaneous cure, by wonderfully simple means, upon his friend. My patient, it turned out, though he did not return to tell me the effect of the operation performed on him, had not concealed it from others, but candidly attributed his cure to that cause, in which, when it was applied, he had so little faith.

IN the course of last summer, I was requested by a lady in Heriot Row, to visit an old man in Stockbridge, one of the objects of her unbounded charity, who, some weeks before, “ had broke three of his ribs by a fall on the corner of a chair.” On examination, I found the injury done to be at the anterior edge of the under end of the shoulder-blade, but no ribs broken. From the violent contusion he had received, the patient could move neither the arm nor the trunk of his body, without the greatest pain. I applied Friction and Percussion to the part, with my bare hand, for a considerable time. He moved his arm immediately, and in every direction he was desired. He rose up also, and sat down, and turned himself in bed with the utmost ease; none of which he could do before, without the most excruciating pain. Having applied a Bandage round his body, I directed him never to humour the pain, but if it returned, or the part became stiff, to apply Friction and Percussion, till he could perform, with ease, all the motions he had gone through in my presence.—These, Friction, Percussion, and Bandages, were all the discutients employed in this case of violent contusion, and the man required but one visit!

A YOUNG LADY, in a boarding-school in Howe Street, when taking a walk one evening in harvest, was struck on the inside of one of her ankles, im-

mediately below the Malleolus Internus, with a stone that rolled down a precipice as she passed along. The point injured was very small, but she was rendered incapable of walking without difficulty and pain. When I was called, which was about a week after the occurring of the accident, the part was slightly swelled, and as painful as it had ever been. I dipped my finger in hair powder, and applied gentle Friction—increasing the pressure as the patient could bear it. I then applied a Compress and Bandage, when she walked better than she had done since she received the injury. Next day, I went through the same operation, by which her walking was still more improved. The third day she felt no pain, the swelling was gone, and she walked as well as ever she did in her life.

Mr. WILLIAM SMITH, George Street, applied to me in the first week of October, (1815,) in consequence of having hurt his back by a fall in a stair. At the time he came to me he was labouring under a violent catarrhal affection also, by which the pain of the back had become greatly increased, both in severity and extent. It now extended from the posterior Spinous Process and Crest of the Ilium of the right side, as high as the true ribs, and from spine to Sternum. His breathing was very considerably affected; and he expected I would give him some medicine internally, to re-

lieve all these complaints. I said I would do so, provided what I was about to try, should fail. I now applied Percussion over all the parts affected. Astonished at what I was about, he asked if "I was putting any thing on his back?" I assured him I was, and what would go through him like a shot. Having continued this process for a short time, the patient went away, quite at a loss what to think of my mode of cure. One thing only he was sure of,—that he was no better. He came back next day, however, and underwent the same operation, still inquiring (he stood with his back to me) if I put any thing on the parts? to which I gave the same answer as before. The third day I met him on the street, when he informed me, in a decisive tone, that I had cured him at last,—that his pains were almost gone. Not next day, but the one following, he called and got his third beating, which settled "the great pain," as he called it, for "he had a little pain also, which he did not much mind." Thus, a severe pain, occupying almost the whole right side of the trunk—occasioned at first by contusion, and aggravated afterwards by cold, attended with some degree of fever, was removed from a man, seventy years of age, by Percussion alone, applied three times only, and not longer than five minutes at a time.

NOTE II.

For if Percussion and Compression obviate incipient inflammation, &c. Page 86.

THE effects of astringent gargles in superficial inflammation of the fauces, are at once a proof of the relaxed state of the capillaries, in inflammation, and of the benefit to be derived from whatever increases their action and strengthens their tone. What, therefore, astringents perform on the capillary blood-vessels of the surface, Percussion and Compression may be presumed to effect, on those of deeper-seated parts. This is a conclusion that cannot be resisted, but on the supposition, of different parts being subject to different laws, when in a state of inflammation, arising from the same cause. Suppose, for instance, that from exposure to cold moist air, I should get both sore-throat and pain in my side, arising from incipient congestion there—that the former should readily yield to a gargle of Brandy or of Port Wine, the latter to Percussion and Compression,—would I not be justified in concluding, that both complaints were removed on the same principle—that of promoting the action, and strengthening the tone of the capil-

lary vessels, admitted on all hands to be the seat of inflammation?

NOTE III.

Articular Surfaces, Synovial Glands, can neither be compressed by Bandages nor stimulated by Friction.
Page 135.

FRICTION applied, merely to the surface, can do little more than stimulate the vessels of the skin. It is impossible it can have either an immediate or remote effect on vessels in the interior of a joint. It does not follow, however, that Friction cannot be applied to articular surfaces. If there is any motion remaining to a joint, this is quite practicable, and attended with the happiest effects. Whenever, therefore, I meet with a joint whose motion, either from dryness of the synovial surface, or from contraction of the tendons, is impaired, I sedulously imitate, as far as practicable, the natural motions of the parts. In this way, contracted tendons are elongated, thickened and tender capsular ligaments are extended, and the vessels of dry articular surfaces are stimulated to action, and pour out their lubricating liquor.

NOTE IV.

For it is extremely probable, the good thus obtained does not depend, &c. Page 137.

IF the advantage obtained by Rheumatic patients from riding on horseback depended altogether on increased perspiration, then Sudorifics and the Warm Bath, would, separately, prove a certain cure for Rheumatism—which we find is not universally the case. Riding on horseback has this advantage, that not only are all the parts of the body subjected to a concussive motion, but great part of the muscles are put in action—which, to the parts they compress, are equivalent to Friction. I know a gentleman, extremely subject to Rheumatism, who, whenever he is threatened with an attack, has recourse to a ride, which never fails to operate as a complete preventive. So powerful a corrector, indeed, of congestion, is this mode of gestation, that I firmly believe it would be of incalculable advantage in many cases of fever.

I know a medical gentleman, who was practising, more than twenty years ago, in a country situation, where a bad Typhus prevailed. One morning he awoke with every symptom, as he supposed, of the

fever. At breakfast-time he took horse to go to his friends, who lived twenty miles off; and, was under some alarm lest he should not be able to reach his destination. He had not rode above six miles, however, when he found himself perfectly well.

I have somewhere read an account of a young man, who, in the middle of a Typhus fever, was driven in a cart the distance of seventy-two miles. It was feared the rough motion of the vehicle would have killed him; but to the utter astonishment of all concerned, the patient was free of his fever at the end of his journey. What the motion from riding on horseback, or in a cart, is to the system, Percussion is to a particular part.

NOTE V.

At this point precisely, and quite beyond the reach of Compression; was the pain now seated. Page 169.

HAD I facts at my command, it is impossible I could make a selection more directly corroborative of the theory I have endeavoured to establish, of the proximate cause of Rheumatism, than are those that occurred in this man's second attack.

Not only so—they throw a glare of light on the proximate cause of Palsy also. They directly prove, that Palsy is not occasioned by exhaustion, but by obstruction of the nervous power. In the first attack, the seat of the pain was exterior to the spine, and therefore within the reach of Compression, to which it readily yielded; in the second, the cellular texture covering the occipital nerves at their origin must have been the seat of the affection; for all the parts that these nerves supply became excruciatingly painful and swelled. This affection, or distention of the vessels of the cellular substance, advancing farther inwards, along the Medulla Oblongata, must have pressed next on the ninth pair of nerves, which are expended on the organs of speech chiefly. Hence paralysis of these, and of other parts, occurring so rapidly and in succession.

It would from this appear, that Compression arising from congestion in the vessels of the cellular texture, forming the sheaths of the nerves and of their Fasciculi, constitutes the proximate cause of Palsy; and that, therefore, the proximate cause of Rheumatism and of Palsy are affections of the same general structure. Nothing can resist the evidence, to this effect, of the facts occurring in this man's case. The same cause which, operating on parts exterior to the spine, and on branches only of nerves, produced Rheumatism; when extended

to parts within the spine or Cranium, and to the origins of nerves, produced Palsy.

Should it be asked, Why, if Rheumatism and Palsy are both produced by congestion in the cellular membrane, their symptoms are so very different? I would reply, that compression of a nerve at its origin must produce effects very different from those occasioned by the compression of a few branches; and, that the pain attendant on Rheumatism depends, most likely, on the degree of pressure on the nerves of the part affected. In Rheumatic affections of the Sciatic nerve, indeed, we have a fine example of Rheumatism and Palsy alternating. At one time the pain is exquisite; at another, and often in a few hours, the parts which that nerve supplies become, for a time, nearly destitute of feeling.

Two facts, so far as I know, entirely new, occurred to me in the course of last summer, (1815,) which exhibit the powers of Percussion as applied to Palsy even, in a very striking light. The first I observed in a fat, lumpy, tallow-looking woman, upwards of forty years of age. She complained of a slight stupor, of a dull, obtuse pain in her head, and of total inability to move her right arm. I attempted to let blood in the arm, but did not succeed. I therefore proposed opening the jugular vein, and leeches to the temples, which were declined; and, as she was going, she said, to the

country immediately, for the benefit of her health, I never heard more of her. Before I left her, however, I urged her to try to move her arm, and found she had some, though very little, command of it below, but none above the elbow-joint. I applied Percussion to the shoulder and side of the neck for some minutes, and then desired her to try if she had acquired any more power over the arm. To the astonishment of all present, she immediately lifted her hand to the crown of her head, and moved her arm in every direction she was desired.

The second fact occurred in Michael Meredith, aged sixty-four, who applied to me in August, after having been first in the Clinical Ward, and after it was shut, in one of the ordinary wards, of the Royal Infirmary, from which he was dismissed, he said, as incurable. His whole left side being affected with Palsy, he walked as ill as it is possible to conceive of a person who can make progress at all. The reader will be able to form some idea of the total want of command this man had over his arm, when I inform him, that, having asked why he held it in a sling? he said it was to prevent it dangling backwards and forwards when he walked. Without the smallest expectation that I could be of any service to him, yet with the fact above related, that occurred in the woman's case, fresh in my recollection, I set him down and began Per-

cussion on the shoulder and side of the neck. He immediately complained of pain on the anterior and inner part of the joint, below the clavicle, and in the fore-finger. These effects, I thought, augured well. I continued the Percussion till the pains abated, and then desired the patient to try if he had acquired any command over his arm. He gradually lifted his hand to the pit of his stomach. This he did five or six times; and would have lifted it still higher, but for a large tumour that projected from his left breast. I performed the same operation on the inferior extremity, when he complained of severe pain betwixt the hip-joint and tuberosity of the Ischium, (seat-bone) so that had this man complained of no other part than his leg, I should have concluded that he laboured under Sciatic Rheumatism instead of Palsy. When he returned next day, I found he had not retained the power he acquired the day before in his arm, but he had not lost it altogether; and it was not only soon restored, but increased by Percussion. The leg was so much improved by two operations, that he walked to Piershill Barracks and back again to Edinburgh—a thing, he said, he could not have attempted when he applied to me. Anxious to ascertain what Percussion could really effect in Palsy, I urged this man to be punctual in his attendance; but he now absented himself for several days, and

when he returned I refused to have any thing farther to do with him.

That in the first of these two cases, the disease originated in the brain, there can be no manner of doubt; and, though Meredith asserted he never complained of his head, there can be as little doubt concerning the origin of his affection. His wife, indeed, called with him the second day, and told me, he insisted for some time after he was seized, that he had two left arms. How then comes it to pass, that Percussion, applied to a part at a distance from the seat of the disease, has the power of removing it in any degree? To this it is not easy to give an answer. But it may be observed, that an organ that can convey intimation to the brain, from the remotest parts of the body, in less than the twinkling of an eye, may well be supposed to be affected to its very origin, by so powerful an agent as Percussion. It is not inconceivable therefore, that the nerves of a paralytic limb may receive from Percussion, such a degree of vibration as will reach their common origin, and elicit from it, though suffering Compression to a certain degree, a partial transmission of nervous energy.

NOTE VI.

—*which the ordinary mode of treating Rheumatism and Palsy, &c. Page 189.*

Dr. DUNCAN, senior, of this University, divides Rheumatism into four stages, each of which is distinguished by symptoms peculiar to itself. Thus, the Inflammatory stage is accompanied with fever, heat, swelling, and redness; the Irritable is distinguished by acute pain, burning heat in the parts affected, absence of general Pyrexia, although the pains continue to be aggravated during the night; the Atonic is attended with dull pain, which is relieved by heat, especially of the bed; and lastly, the Paralytic stage is known, by emaciation and weakness of the limbs.

Whoever has had much practice in Rheumatism must admit, that these distinctions are founded in fact; and though the different stages run into each other so, that the line of demarcation is not easily ascertained; such a division is admirably calculated to facilitate practice; and reflects the highest credit on Dr. Duncan's accuracy of observation, and powers of discrimination.

NOTE VII.

Thus was a violent sprain removed completely, by one application of Percussion, &c. Page 198.

It is probable, and indeed most likely, that, in this case, some of the tarsal bones had suffered partial dislocation. For had the excruciating pain that was present depended entirely on the injury done to the soft parts, it is not likely that Percussion, however beneficial, could instantaneously have produced such great effects. But on the supposition of a partial displacement of a small bone, it is quite conceivable, that the motion given to all the parts by Percussion, would effect its reduction. Here then, is the whole secret of the success of ignorant Bone-setters completely developed. They do at random and by force, what regular practitioners ought long ago to have done on scientific principles. Such, however, is the perverseness of mankind, that they will rather remain in ignorance, or allow their patients to suffer, than either learn from, or follow the practice of supposed inferiors. That the individuals denominated Bone-setters, often do incalculable mischief, is beyond a doubt. But that they often succeed where regular practitioners have fail-

ed, in giving relief from pain, originating in fractures, dislocations, and sprains; and that they often succeed in giving motion to joints, the immobility of which had defied all ordinary practice, are also matters of daily experience. Nothing so easy as to clear up this mystery. The principles on which I conduct the cure of Rheumatism and Sprains, completely unmask the supposed superior skill, and satisfactorily account for the now-and-then success attending the random practice of Bone-setters. A person, for instance, suffers dislocation of the Humerus, by which the parts concerned in its motion are severely sprained—he applies to a surgeon, who is a complete anatomist, a dexterous operator, a learned physiologist—the luxated bone is reduced, the arm slung; and if there is no contusion, and little reason to apprehend inflammation of the parts, the patient is dismissed with injunctions to take care of himself. By this is meant, that he must keep his arm in one posture for a length of time. When the parts are supposed to have recovered their tone, motion of the limb is permitted. But the limb cannot now be moved without great pain. Here the patient's *volunteer doctors* strike in, and advise, that “The arm has not been right set.” Off he goes therefore, to a Bone-setter, who answers all questions by a significant shake of the head. From this it is inferred, that he possesses very superior skill—that he sees as by intuition, the

error that has been committed, the fault that must be rectified. The patient therefore, now cheerfully submits to a degree of pain, which, had his surgeon inflicted, he would have been pronounced a savage. The operator pulls and twists the limb, he thumbs and nibbles the joint, he naffows the muscles, till the pain which was at first excruciating, begins to abate. The patient can now move his arm without aid; and therefore concludes, that the business which was at first bungled by his surgeon, is now done in style. Now, all that the Bone-setter has to do, (all that he does in such a case) is to promote circulation in those vessels, which, from the violence they suffered, are in a state of atony, and unable to propel their contents. The moment they are roused to action, motion becomes practicable; and this, at first an effect, now becomes a cause of farther improvement. Did surgeons, in cases of luxations and sprains, apply Friction, Percussion, and Bandages from the beginning, according to circumstances, practising at the same time, the natural motions of the parts, the celebrity of Bone-setters would be heard of no more.

NOTE VIII.

—*had in vain spent five weeks at a Watering-place in England, in hopes of bringing on a regular paroxysm of Gout, &c. Page 200.*

WHETHER there was a mixture of Gout in this gentleman's case, or not, it is impossible with absolute certainty to ascertain. He denied that ever any thing of the kind was known in his family; and yet the painful swelling of the joints of some of the toes, strongly indicated something of this nature. I certainly gave it as my decided opinion, that there was no Gout present. But whether right or wrong in so doing—one thing is certain, That the pain and swelling of the joints of the toes, yielded as readily to Percussion and Compression, as did the pain and swelling of those parts which were, without doubt, affected with Rheumatism. If therefore, there was any mixture of Gout in Sir T——'s case, then Percussion and Compression are a remedy for Gout, equally as for Rheumatism. I see nothing, indeed, in the nature of things, why they should not be as beneficial in the one disease as in the other. In Madame Rey's case, I applied Percussion and Compression indiscriminately, to

parts affected with Rheumatism, and to parts which were suffering from Gout; and with immediate and great advantage to both.—It is my intention to prosecute this subject farther.

NOTE IX.

This affection of the neck and shoulders first became very troublesome in the month of March. Page 207.

LORD M—— had been complaining two years previous to this, of crampish pains in various parts of the body, attended with loss of appetite, and flatulency of stomach and bowels. These evils if not the consequences, were, at least, coeval with a suppression of urine, unattended with any other morbid symptom than mere enlargement of the Prostate gland. His Lordship took a great deal of exercise, on foot and on horseback, with the view of regaining appetite, and of strengthening the constitution. The digestive powers, however, remained very much impaired; flatulency became more and more oppressive; the crampish pains increased in frequency and force; “and though, in May, they appeared to yield to anodyne clysters, they continu-

ed to harass him so much as to prevent, by the pain the motion excited, his airings in his carriage, or his travelling to any distance without the risk of being confined by them."

NOTE X.

—the first time I attempted rotatory motion of the Humerus, the patient had almost fainted away before I was aware. Page 224.

It is not to be inferred from hence, that our mode of curing Rheumatism is a painful operation. Quite the reverse. I uniformly consult the feelings of the patient, as to the degree of force employed in applying the remedy. To do otherwise, would be attended with no advantage whatever, either to patient or practitioner. Accordingly, I never met with any, in earnest about being cured, who ever made a serious objection to my mode of proceeding. Besides, any trifling pain that may arise from first touching very tender parts, is quite momentary—is at an end the instant the cause (hand of the operator) is removed, and that is, in the twinkling of an eye. No doubt, I

now and then meet with individuals, who, while they entertain a very high opinion of their own resolution and fortitude, will yet submit to no inconvenience whatever—will use no endeavour to second my efforts. I am aware, that some of this cast have done what in them lies, to discredit my mode of cure, as harsh and unsufferable; but surely, the thinking part of mankind will not allow themselves to be influenced by representations, flowing entirely from prejudice.

NOTE XI.

Not so with Percussion; its only effects are to rouse to action, the dormant powers of the constitution, and to obviate congestion in the nervous, equally as in the sanguiferous system. Page 233.

THAT Percussion possesses the power of promoting an equilibrium in the nervous system. is not a matter of conjecture only, but of absolute certainty. And it is from this mode of operation alone, that I conceive it beneficial in Mr. D.'s case. Accordingly, when pain is concentrated in the left side of the neck, which is often the case, Percussion applied to

the opposite side, produces the most soothing effects, and relief of all the symptoms. Steady, equable Compression even, on the right side of the head, relieves pain on the left. I do not therefore, confine the application of Percussion and Compression to the parts affected, in Mr. D.'s case. He finds great benefit from their application to the whole trunk and extremities. And what must be regarded as a matter of the highest importance—Percussion, how often soever applied, is ever new. It is not like medicines exhibited internally, which must be increased in quantity, in proportion to the frequency of repetition: its effects are uniform, and at all times the same.

From these facts, I am strongly inclined to believe that Percussion will be found a powerful auxiliary in the cure of Tic Douloureux and Tetanus. A most skilful and learned Physician of this city, has indeed declared, I am informed, Mr. D.'s complaint to be a species of Tic Douloureux on a large scale. If this opinion is well founded, then we have proof positive, that Percussion is beneficial, and that in no small degree, where the knife only has hitherto been supposed to avail. But if Percussion is beneficial in painful affections of the nerves, and in spasmodic affections of the muscles, we may not only from analogy, but *a priori* conclude, that it will prove an efficient remedy in

Tetanus also. And if this should prove to be the case—if it shall be found to supersede the necessity of the immense bleedings on the one hand, or the astonishing doses of opium on the other, as recommended by different practitioners, for the cure of this terrible malady—then Percussion has a fair claim to be considered one of the most important Powers ever introduced into medicine.

NOTE XII.

The reader, whoever he is, if ever attacked with Rheumatism, will not long hesitate, &c. Page 243.

MANY physicians are of opinion, that a very free use of the lancet in Acute Rheumatism, ensures a slow recovery, and very often Arthrodynia, or chronic pains in the joints. This opinion accords with reason and common sense. For if the proximate cause of the disease consists in debility of the parts affected, can it be supposed that a remedy directly and powerfully debilitating, can ultimately have, if carried too far, or employed unnecessarily, any other effects than that of fixing what was intended to be removed? I am far from asserting

that general blood-letting is always improper in Rheumatism. Often it is advisable, sometimes necessary; but the detraction of a Scotch pint of blood, in the course of twenty-four hours, where there is no affection of the lungs or other internal organ, I call breaking down a constitution as with axes and with hammers. “*Nam ut sanguis semel missus nunquam in venas, sic neque vires cum illo amissæ in variis morbis unquam refici possunt.*” (Conspect. Medicin. Auctore, Dr. Gregory.)

When I am called to a patient labouring under Acute Rheumatism, and find him oppressed with a load of bed-clothes, and covered with sweat, the consequence of mere oppression; whatever the state of the pulse, whatever the severity of his pains may be, I instantly direct the surface to be rubbed with flour till dry, and then with flannel or the flesh-brush. During this process the cold air is freely admitted to the whole body, and I never found any detriment arise from the practice: On the contrary, the patient uniformly feels refreshed and relieved. I have carried the application of cold in Rheumatism farther than even the admission of cold air to the body. To a wrist in a state of inflammation so high that the patient could not suffer it to be touched, I have applied cold water with a sponge with great deliberation. By the conversion of the water into vapour, so great a quantity of heat was

carried off, that the tumour could in a few minutes suffer both Friction and Percussion. From the good effects, indeed, which I have produced by the admission of cold air, I am strongly inclined to believe, that sponging the body with cold water, when the skin is hot and dry, would be attended with the happiest effects in Acute Rheumatism.

THE END.

